INFRASTRUCTURE IN A CHANGING WORLD:
TRENDS AND CHALLENGES

edited by **Carlo Secchi** and **Alberto Belladonna**

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7. A Geopolitical Perspective on China's Infrastructure Development

Alessia Amighini

Massive investment in infrastructure development has been a persistent element in China's economic growth over the last four decades. Although there is a significant disagreement among scholars about the precise contribution of infrastructure investment to regional growth and development, China's rise as the world factory would hardly have been possible without a massive investment in new infrastructure. Most importantly, regardless of its economic impact, there can be no doubt that economic ends were among many other objectives of China's overall infrastructure investment strategy, as remarkably described in former Chinese President Jiang Zemin's words when commenting upon the Qinghai-Tibet railway under construction in 2001: "Some people advised me not to go ahead with this project because it is not commercially viable. I said: 'This is a political decision'".

China's infrastructure policies have a now widely acknowledged geopolitical significance within the international community, since President Xi launched the Belt and Road Initiative (BRI) back in 2013 – arguably the largest cross-border infrastructure development programme in history – , aimed at improving connectivity between China and a number of partner countries, both in its own neighbourhood and further afield. Reshaping the geography of China's connectivity with the rest of the world, compared to the legacy of past

maritime networks centred on the Treaty Ports (Hong Kong, Canton (Guangzhou), Amoy (Xiamen), Foochow (Fuzhou), Ningpo (Ningbo) and Shanghai) has massive geopolitical motivations and consequences. Yet, the geopolitical dimension was also behind the biggest domestic infrastructure projects that designed all over China long before President Xi's ambition scaled up in 2013. Many, if not all, infrastructure projects in China pursue political ends, from extensive domestic and international political power to particular political control over domestic, neighbouring, contested or foreign territories.

This chapter will provide a geopolitical perspective of infrastructure policies in China, both at home and abroad, focusing mainly on the last two decades. The chapter concludes with some observations on the long-term impact and sustainability of cross-border infrastructure policies that systematically put political objectives ahead of economic ones.

Domestic Infrastructure as a Tool for Geopolitical Control

Railways, the first and most important passenger transport infrastructure in China, have always been a means of solidifying political control over vast portions of land within the country and infrastructure has played a crucial role in China's economic development strategy especially since the 1980s.[1] Based on growth pole theory, three growth poles were built in the eastern regions, i.e., Pearl River Delta, Yangtze River Delta and Beijing-Tianjin-Tangshan areas. The central idea of growth pole theory is that economic growth is centred at the core of a region,

[1] First railways were originally built during the early 20th Century by the Qing government and Western countries. Much of the financing, construction and influence over the placement of the railroads came from Western countries aiming to connect historical cities to colonial cities outside of China. See A. Banerjee, E. Duflo, and N. Qian, "On the road: Access to transportation infrastructure and economic growth in China", *Journal of Development Economics*, vol. 145, 2020.

with core industries around which other industries develop at the periphery. Because of scale and agglomeration economies near the growth pole, regional development is unbalanced. Therefore, transport and logistics help spread the outcome of rapid development in the core to surrounding areas.

Pearl River Delta is the chief example of the double-edged development strategy. In 1979, when the fertile areas north of Hong Kong were primarily agricultural land, the Chinese government led by Deng Xiaoping created four Special Economic Zones (SEZs). The Shenzhen and Zhuhai SEZs were meant to welcome the burgeoning increase of businesses in Hong Kong. Large-scale infrastructure projects for transport and rapid urbanisation were major tools for building a huge integrated area now hosting over 65 million inhabitants, with a GDP equivalent to that of South Korea. As a result, Pearl River Delta benefited the former underdeveloped delta areas, but at the same time diluted the economic power of Hong Kong to a point that eventually overturned the regional balance of power between Hong Kong and mainland China: once 25% of PRC GDP, Hong Kong now accounts for a mere 3% of PRC GDP.

A new development framework has been organised in an enlarged area around the Pearl River Delta, since 2017. Known as the Greater Bay Area (GBA), it encompasses 11 metropolises covering over 56,000 square kilometres, and has 70 million inhabitants and a gross domestic product of over $1,500 billion. The goal is to transform the area of Hong Kong, Macao and nine cities in the southern province of Guangdong (Guangzhou, Shenzhen, Zhuhai, Zhongshan, Jiangmen, Zhaoqing, Foshan, Dongguan and Huizhou), which already accounts for 12% of Chinese GDP, into the world's top region for technological patents, seeding of start-ups, investments in innovative companies and digitalisation. Beijing wants to transform this cluster of cities, businesses, start-ups, finance and infrastructures into the Silicon Valley of the future.

Again, infrastructure is central: the plan provides for the expansion of Macau airport, the construction of connections for

Hong Kong airport and the strengthening of Guangzhou and Shenzhen as a hub for international flights. Construction sites will open to expand ports, back ports, warehouses and highways to the internal regions, where dozens of multinationals, from Apple to Dell, have data centres. A high-speed rail line will minimise connections between the east and west coast of the mouth. Most significantly, the former colonies of Macao and Hong Kong, which are currently special administrative regions under the "one country, two systems" rule, will be connected to the mainland by the Hong Kong-Zhuhai-Macau Bridge, which comprises 31 miles of bridges, tunnels and three man-made islands, to form the longest bridge system in the world. By signing agreements on economic cooperation, the Beijing government has gained influence over the two former colonies. While fostering integrated economic development, Beijing is increasing its control over territories that are intended eventually to be integrated into the PRC, amid widespread demonstrations and dissent that are already threatening the role of China.

GBA is a triple-edged development strategy: besides economic development and political control, technological innovation is a chief objective. Beijing wants to open the Guangzhou-Shenzhen-Hong Kong-Macao corridor for innovation and technology, with policies that promote the exchange of talent, capital, information and technology, and develop a major regional data centre. The strategy for Guangdong is linked with Made in China 2025, another multi-year plan with which Beijing aims to make its economy more digitally and technologically advanced. The cornerstones are investments in the internet, supercomputers, artificial intelligence, robotics, industrial automation, new materials, railways, aerospace, maritime infrastructure and life sciences. The same priorities dictate the choices of industries to be courted on the Pearl River delta. The GBA plan will finance the creation of co-working, start-up incubators and innovation centres in a region that now has 270 industrial districts and 330 specialised markets. Technological innovation also has a military twist, to the extent that new tech developments have invariably

involved dual-use (i.e. civil and military) technology. The region will be wired in fibre optic and equipped with free ultra-wideband hotspots. To put things into a broader perspective and give a clear idea of the overall geopolitical significance of the PRC's national development plans, the GBA will also be boosted with funds from another Chinese super-project, the BRI. Put side by side, BRI, GBA and Made in China 2025 are the ingredients of an increasingly aggressive long-term recipe to achieve technological leadership and maybe autarky.

As the majority of economic activity became increasingly concentrated in the eastern and south-eastern areas of the country, the government started investing heavily in infrastructure in northern and western areas so as to fuel economic activity in inland provinces and therefore rebalance growth. This is how the "Go West and Central China Strategy" started, based on the same growth pole theory framework. The Pan-Beibu Gulf Economic Zone (2008), Guanzhong-Tianshui Economic Zone (2009) and Chengdu-Chongqing Economic Zone (2011) were planned as three national-level growth poles, in the northern, central and southern areas of Western China respectively.

The Chengdu-Chongqing Economic Zone is particularly interesting as it was designed at a time when the rationale of domestic economic development in the West of China started to intertwine with the need to developed cross-border infrastructure linking land-locked Western China to foreign markets. This economic zone has been recently upgraded to become a new national development area, the Liangjiang New Area (LJNA), the core area of the Chongqing pilot free trade zone and China-Singapore connectivity project. Chongqing, Chengdu and Xi'an form the so called "Triangle of the West" economic region with historically integrated chains of production.[2] It has important open platforms, such as the

[2] Y. Lan, (ed.), *The origin of the historical development of Xisanjia'*, Southwest Normal University Press, Chongqing, 2011.

bonded port and Guoyuan Port, and three innovation platforms (the Liangjiang Digital Economy Industrial Park, Lijia Smart Life Experience Park and Liangjiang Collaborative Innovation Zone) forming the Liangjiang International Development Zone (LJIDZ). Half of the Fortune 500 companies have settled in the area. Infrastructure is a central element of the new area.

Yubei district plays host to all the major infrastructure projects in LJNA and four segments of national expressways that connect it to other major cities in western and coastal regions, namely Wuhan (1,000 km), Shanghai (1,800 km), Guangzhou (1,600 km), Xi'an (850 km), and Chengdu (300 km). Besides roads, the major transport infrastructure projects in LJNA include light-rail systems connecting districts with one another and standard railways for longer distances: the Longtousi Railway Station in Yubei connects the new area to other major urban areas. The Youxin Railway is 11,179 kilometres long and connects the urban core area of Chongqing, including LJNA, to Xi'an and Lanzhou (two new development areas), then to Urumqi. It then crosses the border en route to Europe, travelling through Kazakhstan, Russia, Belarus and Poland before reaching the port of Duisburg in Germany. As the journey from LJNA to Germany takes two weeks (20 days less than by sea from the ports of Southern China via the Strait of Malacca, the Indian Ocean and the Suez Canal), the Youxin Railway is an effective means of transport for automobile spare parts, laptops and light machinery manufactured in transnational value chains between China and Eastern Europe. It is a tangible example of how domestic infrastructure policies in China have long-term ends that might well supersede the short-term economic gains of an individual project.

Besides transport networks, whose political purpose might be more prominent, some individual projects may also be pertinent examples of infrastructure development with multi-faceted objectives, such as the Daxing Beijing International Airport. The airport's first building was completed for the 2008 Olympics, and further expansion is due for completion

by 2025, when it should surpass Dubai's Al Maktoum International Airport in cost, total square miles and passenger and plane capacity. Yet, the project "has nothing to do with capacity: around three quarters of China's airspace is controlled by the country's military, which has the power to ground civilian flights if any of its planes are in the air".[3] This explains the frequent delays to commercial flights, which average 43 minutes at Beijing's existing airport, making it the worst-performing airport in the world for punctuality. "There are no plans to commercialise more of the country's airspace or limit military control, meaning delays will likely be just as common at Daxing Airport".[4]

Infrastructure in China's Growth

Notwithstanding the evident political ends to infrastructure investment, it is not an overstatement to highlight that infrastructure is at the heart of China's economic growth experience over the last 30 years. Transport infrastructure (highways, railways and air transport) is more often mentioned as a key factor in China's growth and development. The types of infrastructure and investment size have differed significantly over time. During the 1980s, investment was relatively low and mainly targeted railway construction. Since the early 1990s, investment in infrastructure has become a major policy priority, which explains the substantial increase of transport as a share of state fixed-asset investment, mainly in roadway construction, which increased the most between 1998 and 2007.[5] Investment in waterways has only started growing

[3] S. Perryer, "How China uses infrastructure as a mean of control", *World Finance*, 2019.

[4] Ibid.

[5] Junjie Hong, Zhaofang Chu, and Qiang Wang, "Transport infrastructure and regional economic growth: evidence from China", *Transportation*, vol. 38, 2011, pp. 737-752.

since 2004. Airway infrastructure was improved substantially from 1998 to 2000, then slowed down before starting to increase again.

A variety of different types of physical infrastructure are also essential, such as municipal infrastructure (street lighting, urban roads, bridges and underground infrastructure), utilities (electricity, water and gas) and e-infrastructure, i.e. communication networks. Moreover, social infrastructure such as education, health and housing is also crucial to achieving higher economic growth,[6] as it promotes better utilisation of physical infrastructure. It is widely acknowledged that infrastructure facilities such as power generation, energy distribution, rail and air transport were the most important infrastructure in China's growth record. More recently, many transnational infrastructure projects have been launched under the umbrella of BRI, aimed at improving connections between China's provinces and the rest of the world. To the extent that it will boost Chinese exports and help reduce the "missing trade" with countries lacking sufficient transport networks, BRI will also foster more economic growth.

However, it is much more controversial to establish a precise link between infrastructure and growth in China. On the one hand, a large number of economic studies have reported on the central role of transport infrastructure as a defining feature of China's growth model since the 1990s.[7] Those studies argued

[6] P. Sahoo, D. Ranjan Kumar, and N. Geethanjali, *Infrastructure Development and Economic Growth in China*, IDE DISCUSSION PAPER No. 261, 2010.

[7] See among others: S. Démurger, "Infrastructure development and economic growth: an explanation for regional disparities in China?", *Journal of Comparative economic*, 2001; S. Straub, C. Vellutin, and M. Warlters, *Infrastructure and Economic Growth in East Asia*, The World Bank, Policy Research Working Paper, no. 4589, 2007; A Banerjee, E. Duflo, and N. Qian, *On the Road: The Effect of Transportation Networks in China*, Yale University Working Paper, 2009; C. Bai and Y. Qian, "Infrastructure development in China: the cases of electricity, highways, and railways", *Journal of Comparative Economics*, 2010; P. Sahoo, D. Ranjan Kumar, and N. Geethanjali (2010); S. Zhang, Y. Gao, Z Feng, W. Sun, "PPP application in infrastructure development in China: Institutional analysis and implications",

that investment in transport infrastructure and proximity to transport routes both fuelled economic growth in Chinese cities and provinces. While the East Asian countries were fighting economic crisis in 1997-1998, their investment in infrastructure fell sharply, whereas the Chinese Central government implemented a fiscal stimulus in the form of transfers to local governments and allowed the issuance of state debt to fund infrastructure. Since then, investment in infrastructure has driven rapid growth both directly and indirectly. The direct impact results from infrastructure investment being the largest contributor to fixed capital formation, which more than doubled from 5.7% of GDP in 1998 to over 14% in 2006, when the share of infrastructure in total investment expanded to almost one-third of gross capital formation. It further increased to 16% between 2009 and 2014, when the global financial crisis reduced import demand from all around the world and China needed to boost growth by increasing investment in real estate and physical infrastructure. As a result, China is now the world's largest investor in infrastructure, spending an average of 8.5% of GDP between 1992 and 2011. According to Sahoo et al.,[8] the magnitude of output elasticity of infrastructure has varied between 0.20-0.41 over the years 1984 to 2008, which is higher than the output elasticity of private investment or public investment. Moreover, beyond the measured effect, a further positive but indirect impact of infrastructure on growth is the spill-over effect on the rate of return of investment in any other economic sector, as a result of improved infrastructure. Increased availability of infrastructure and low labour costs paved the way for successful economic policies designed to attract huge inflows of foreign direct investment (FDI) targeted mainly at the manufacturing sectors, which were the driving force behind the original growth.

International Journal of Project Management, vol. 33, no. 3, 2015.

[8] P. Sahoo, D. Ranjan Kumar, and N. Geethanjali (2010).

A rather divergent perspective has contested the view that infrastructure had positive spill-overs on growth in China. Out of a large number of major transport infrastructure projects completed since the early 1980s (95 between 1984 and 2008, 74 consisting of roads and 21 of railways), 55% had an *ex post* benefit-to-cost ratio of less than 1.0 – i.e. they were economically unviable.[9] This is due to both cost overrun and benefit shortfalls. As regards cost overrun, in China infrastructure construction costs are systematically underestimated, so that actual costs are on average 30.6% higher than estimated costs. As regards benefit shortfalls, traffic performance ranges from a majority of the routes with insignificant traffic volumes to a few routes that are highly congested, which suggests a severe misallocation of resources.

The fact that the financial viability of a majority of projects is questionable and their economic impact was significantly overestimated suggests that the choice of individual projects, including their geopolitical implications, was dictated by a number of factors of a not strictly economic nature. This view has stressed that only productive infrastructure (i.e. investment with positive net present value) can have long-run positive impact on growth:

> increased physical capital accumulation (irrespective of whether the investment has a positive or negative net present value) will increase the GDP in the short run as a natural accounting consequence of piling investments (productive or not) into fixed capital. In fueling economic growth today by excessive capital accumulation, policy-makers risk suffocating the possibility of steadier and more resilient future economic growth that comes from greater efficiency and productivity of using scarce factors of production.[10]

[9] A. Ansar Atif, B. Flyvbjerg, A. Budzier, and D. Lunn, "Does infrastructure investment lead to economic growth or economic fragility? Evidence from China", *Oxford Review of Economic Policy*, vol. 32, no. 3, 2016, pp. 360-390.

[10] Ibid., p. X

Besides the poor efficiency of the majority of infrastructure projects in China, they also raise a number of additional costs such as debt accumulation and loss of alternative investment opportunities. Therefore, the role of infrastructure in China's growth miracle would appear to be a myth, because "investing in unproductive projects results initially in a boom, as long as construction is ongoing, followed by a bust, when forecasted benefits fail to materialize and projects therefore become a drag on the economy".[11] This view is consistent with that of certain China scholars,[12] who have criticised the huge amount of public investment in domestic transport infrastructure after 1990, on the basis of the argument that heavy investment in infrastructure was not an engine of growth, but happened after economic and institutional reforms had made the Chinese miracle possible.

More recent research has tried to disentangle the ambiguous effects of transport infrastructure on China's growth by studying the differential impact of access to transport infrastructure on economic performance in Chinese regions between 1986 and 2006.[13] Results show that regions closer to historic transport networks have higher levels of GDP per capita, higher income inequality, a higher number of businesses and higher average business profits. However, it does not have a large impact on the growth performance of those areas (the elasticity of per capita GDP with respect to distance from historic transport networks is approximately -0.07). The reason why well connected and poorly connected areas do not perform very differently from one another is lack of labour mobility. Without labour mobility, access to transport infrastructure has not brought about a massive shift of labour from poorly connected to better connected areas, so the differential impact of infrastructure on per capita GDP was negligible.

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[11] Ibid.

[12] Most notably, Y. Huang, "China Could Learn from India's Slow and Quiet Rise", *Financial Times*, 23 January 2006.

[13] A. Banerjee, E. Duflo, and N. Qian (2020).

The Geopolitics of Transnational Infrastructure under BRI

China's economic growth is fuelled by its massive export-oriented manufacturing industries, which have to import large amounts of intermediate components, raw materials and energy. As these raw materials and semi-finished goods mainly travel to China by sea, secure and reliable maritime trade shipping lines are crucial to China. At the same time, Western development plans to rebalance growth across the East and West of the country has been accompanied by a growing need to connect the West of China to Europe by land routes.[14] Overall, the need to secure the sourcing of energy and inputs from several locations abroad has inspired a long-term vision to diversify the connectivity networks – by sea and overland – that link China to the rest of the world: the Belt and Road Initiative aimed to build transport infrastructure networks through around 60 countries in Asia, Europe, Oceania and East Africa.

From a global perspective, the BRI is a major international development project from which China is also gaining many benefits. The standard framework of the BRI works through commercial loans given by the Chinese Government to recipient countries where projects are to be carried out. The actual construction of infrastructure in BRI projects is usually assigned to Chinese firms using Chinese labour and suppliers. At the same time, however, the central goal of the BRI is not only economic, but also political and strategic: using cross-border infrastructure, China aims to facilitate business deals and channel aid and commercial loans, thereby increasing its influence on the rest of the world, under the pretext of facilitating economic development. Although officially presented as an infrastructure project for economic development through greater regional and international integration of the country, the BRI in fact has an

[14] A. Amighini (ed.), *China's Belt and Road: A Game Changer*, ISPI, 2017; P. Cai, *Understanding the Belt and Road Initiative*, Lowy Institute for International Policy, 2017.

established link with the People's Liberation Army (PLA) and its naval arm (the PLA Navy). Through BRI projects, China is acquiring the ability to extend its geo-strategic arm beyond regional borders. For example, the construction in April 2016 of the first overseas naval base in Doraleh, an extension of the port of Djibouti, provides China with access to sea routes a long way from Chinese territory, which have enabled the PLA Navy to establish a presence in the Red Sea and thus also approach the Mediterranean Sea. The hard infrastructure provided by the BRI also enables China to support its military power remotely.

According to the White Paper of the National People's Congress of March 2015 (the document outlining the BRI's vision and action plan), the ultimate goal of the project is the establishment of "a stable strategic space conducive to long-term development of the Chinese economy". Due to the growing number of Chinese investments around the world, this stability is closely linked to that of BRI partners and the regions affected by the project. The PLA is therefore called upon to expand its limits of action to face the growing number of threats surrounding China's foreign interests: these threats include, for example, violent opposition to infrastructures and personnel linked to BRI projects, as in the case of Vietnam in June 2018 and Pakistan in August 2018.

One of the flagship BRI projects, and one of its first to start, is the China-Pakistan Economic Corridor (CPEC), aimed at connecting Gwadar Port in south-western Pakistan to China's north-western autonomous region of Xinjiang, via a network of highways, railways and pipelines to transport oil and gas, about 3,000 km from Gwadar to Kashgar. The economic corridor is also a means through which China is providing Pakistan with telecommunications and energy infrastructure, so as to enable China to secure oil supplies from the Middle East travelling overland to China and thus bypassing the Indian Ocean and the South China Sea. The project also includes intelligence sharing between the countries, which is arguably an economic development goal, but has more a geopolitical end.

Furthermore, a special economic zone has been set up within the CPEC for the joint production of fighter planes, navigation systems and military hardware, with the aim of facilitating the military technology exchange between China and Pakistan with potentially serious consequences for regional stability.

Contrary to what is widely perceived, only part of the BRI investment has resulted in the construction of transport networks: 24% of the total, or 301 projects worth $179.9 billion include both road transport and the rail sector. Out of a total of 1,247 projects carried out worldwide under the BRI, 32% (401) concern the energy sector and aim to increase China's interconnection with the networks of the main suppliers of energy resources, as well as to acquire skills and technology to manage their networks more efficiently. In this context, for example, in 2014 State Grid Europe Limited (SGEL), a company of the State Grid Corporation of China group, acquired a 35% stake in the Italian CDP Reti, a company which controls Snam, Italgas and Terna, the electricity and gas distribution networks. Also in Southern Europe, the Chinese company acquired 24% of ADMIE in 2016, the Greek electricity company, with an investment of €350 million. In July 2018, a similar initiative towards the German distributor 50Hertz was prevented through the purchase of 20% of the company by the German public bank KfW. In Africa, as of 2013, 59 projects related to energy, water and mineral extraction (worth $21.53 billion) have been carried out, with significant investments in coal mining and the construction of hydroelectric power plants and oil plants.

The telecommunications sector, although still relatively marginal (3% of the total of projects), plays an increasingly important role. 2018 saw the completion of the Pak-China Optical Fibre Cable, a 2,950 km long fibre-optic network between China and Pakistan, which will significantly speed up the exchange of data and information between the two countries. The Chinese interest in the construction of telecommunications infrastructures was already clear in Africa, where 70% of the 4G networks were created by the Chinese giant Huawei.

Investments in telecommunications within the BRI are likely to increase, in view of China's technological leadership in the 5G sector, where Huawei and ZTE currently have the most competitive solutions at an international level. In this sector, China has experienced particularly rapid development thanks to generous public subsidies and an internal market protected from foreign competition.

Conclusion

To counter China's rapidly slowing economic growth, since 2009 and even more so since 2014, the Chinese government has returned to major infrastructure investment as a driver of economic development, but also to achieve the high rate of GDP growth expected by the government. Concerns over debt-fuelled infrastructure investment caused Beijing to stop approving such projects in 2017, but in 2018 the need to stabilise the economy led to the approval of China's top 10 infrastructure projects by expected investment value, each costing over 50 billion yuan ($7.41 billion). The National Development and Reform Commission (NDRC) has approved 27 infrastructure projects with a total expected investment of 1.48 trillion yuan ($219.43 billion) since the start of 2018, in an effort to foster growth amid rising trade tensions with the United States.

Some of them are urban transport projects. These include the Shanghai Urban Rail Transit Expansion, nine rail projects, including six subway lines and three intercity railways, to be constructed from 2018 to 2023, aimed at creating better connections between the financial hub's two airports and two major railway stations; the Wuhan Urban Rail Transit, four metro lines plus four urban express lines to ease the city's traffic congestion, from 2019 to 2024; Suzhou Urban Rail Transit, four new urban transit lines in Suzhou (a 41km line will connect the city to Shanghai) expected to be finished in 2023; the Changchun Urban Rail Transit, a group of seven urban rail

transit lines, including the extension of three existing lines and four new lines, are due to be constructed in Changchun from 2019 to 2024. The project is part of the government's strategy to revitalise China's north-eastern provinces and boost the development of the city's new districts. Some others are intercity railways, such as the Guangxi Intercity Railway Network (two intercity railways in Guangxi province, with one from the capital city Nanning to the south-eastern city of Yulin, and the other from Nanning to the south-western city Chongzuo), or high-speed such as the Chongqing-Qianjiang High-Speed Rail, China's first railway tunnel under the Yangtze River – the high-speed rail link between Chongqing and Qianjiang.

In order to understand the increasing capacity of local governments to plan and develop large infrastructure projects, it is also worth noting that the institutional setting that governs the process of funding and developing infrastructure has changed since the very beginning of the reform era in 1978, when projects were mainly small-sized at provincial level. In the late 1990s, the banking and fiscal reforms restructured credit allocation and debt management, which impacted on the process of producing and financing infrastructure. The central government has increased its control over lending and debt management and at the same time reduced the number of counties, while gradually increasing the number of districts, to increase city governments' control over financial resources. As a result, strong city governments with centralised management of capital allocation led to large-scale infrastructure projects, with shorter construction times.

In this quest for rapid domestic growth and growing global dominance, China has been pushing its investment spending over its limits. As regards BRI infrastructure, it has already spent an estimated $200 billion, but that amount is expected to rise. The most pertinent BRI-related risk derives from the fact that China has lent a vast amount of money to countries well below investment grade, disregarding their ability to repay the debt, whereas recipients have high expectations of repayment out of

the future economic benefits. A chief example here is Pakistan, where eight of the 10 largest hydropower plants have been built under the BRI. China has financed construction costs that have increased much more than expected, thereby putting a heavy debt burden on the country's economy, until Pakistan was forced to seek bailouts from the IMF, Saudi Arabia, UAE and China in 2018.

While disregarding the internal efficiency of individual projects, at the same time Beijing has been seeking non-monetary benefits from some investment. A prominent example is the acquisition of the Port of Hanbantota in Sri Lanka, where the government has signed a 99-year lease agreement for the port, which is unprofitable but located along a busy Indian Ocean shipping lane, along with land for the development of a free trade area, to a company controlled by Chinese capital, in an agreement opposed by residents and monks. What started as a 'simple' commercial loan to restructure a secluded port, has now become a means to acquire control over a vast area a few miles from the Indian border: an undisputable example of the geopolitical significance of infrastructure investment.